

## Village Safe Water Memorandum

Date: December 19, 2003  
To: Ken Collison, VSW Program Manager  
From: Jim Patterson, VSW Engineer II  
Subject: Napaskiak Water and Sewer: 2003 End of Season Report

### Work Completed During 2003: (24 homes received water and sewer service)

In a 1995, a VSW Preliminary Engineering report established that it was infeasible to install a community piped system in flood-prone permafrost riddled Napaskiak. The Native Village of Napaskiak evaluated three types of a low flow flush and haul (closed haul) systems by visiting three nearby villages which had operating haul systems in 2000. The Community's leaders selected Cowater Alaska Inc.'s Flush Tank & Haul (FTH)<sup>®</sup> system for Napaskiak. Household components of the FTH<sup>®</sup> haul system consist of evacuating blower(s), water holding tank, a lavatory, a low flush toilet and connection of other fixtures where available including hot water tank. Homeowners and the Council administer the operation & maintenance of these innovative sanitation facilities locally.

In 2003, the Native Village of Napaskiak continued installing Flush Tank & Haul (FTH)<sup>®</sup> systems. Another 24 Flush Tank & Haul (FTH)<sup>®</sup> systems were installed in households in 2003. The community continues to follow the Sanitation Master Plan to address the needs for the next steps to develop improved sanitation facilities in support of a FTH<sup>®</sup> system community-wide in Napaskiak. The design of the boardwalk to the lagoon and rehabilitation of the main boardwalk through the community has been completed. Treated lumber bridge on piling over wetlands for the boardwalk to the proposed lagoon has been constructed. A major upgrade to the existing primary water treatment plant was substantially completed in late 2003.

Expended as of December 31, 2002: \$3,271,980  
Expended during 2003 Construction season: \$2,952,943  
Total Expended through November 30, 2003: \$6,224,923

Total Grants: \$8,063,568  
Interest Income: \$ 23,579  
Balance of Funds Remaining: \$1,855,973

New Grants Received: DOTPF/RSA \$77,100; IHS/ANTHC \$1,255,828; and DOTPF/RSA \$1,058,300  
Proposed 2004 Construction: (5 homes will receive water & sewer service\*)

During 2004 AVCP-RHA will install similar household units to the Flush Tank and Haul<sup>®</sup> systems in another five (5) new homes. In the following year, another three (3) residences should be serviced, pending receipt of funds, bringing the total number of homes served in the community to approximately 108 by 2005. Meanwhile, construction of infrastructure improvements, pending availability of funds, consisting of boardwalks, a new lagoon and upgraded secondary water treatment plant will proceed as contracted by the Native Village of Napaskiak. Also, a new washeteria will be designed and construction will begin to complement the Flush Tank and Haul<sup>®</sup> systems in households by furnishing additional water to wash and dry clothes and take showers. The new washeteria will need arctic pile foundation next to adjacent the secondary water treatment plant's piling (installed in the winter of 2003?).

|           | #Homes | thru 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|-----------|--------|-----------|------|------|------|------|------|------|
| Napaskiak | 108    | 0         | 6    | 11   | 59   | 24   | 5*   | 3    |

\*Associated Village Council of Presidents Regional Housing Authority has installed similar household sanitation haul systems without assistance of VSW in City. Five more in 2004.